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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/602,236	06/24/2003	Bruce H. Storm	1391-34500	8527

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EXAMINER	
VERBITSKY, GAIL KAPLAN	
ART UNIT	**PAPER NUMBER**
2859	

DATE MAILED: 09/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

N/A

Office Action Summary	Application No.	Applicant(s)	
	10/602,236	STORM ET AL.	
	Examiner	Art Unit	
	Gail Verbitsky	2859	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 July 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-8,10-15,17-25,27,28,45-48,50-65,67-76 and 78-84* is/are pending in the application.

4a) Of the above claim(s) *29-44* is/are withdrawn from consideration.

5)☒ Claim(s) *45-48,50-65,67 and 68* is/are allowed.

6)☒ Claim(s) *1,3-8,10-15,17-25,27,28,69-72,74-76,78-80 and 82-84* is/are rejected.

7)☒ Claim(s) *2,73,81* is/are objected to.

8)☒ Claim(s) *29-44* are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 3-8, 10-12,15, 25, 27-28, 69-72, 74-76, 78-80, 82-84 are rejected under 35 U.S.C. 102(b) as being anticipated by Flores (U.S. 5701751).

Flores discloses in Figs. 1-11 a device in the field of applicant's endeavor. Flores emphasizes the need of actively cooling a downhole logging tool electronics (col. 4, lines 61-62). Flores discloses a thermal component (heat generating component) 37 in a hot borehole environment, in thermal communication with a hot heat exchanger 24, 39 a thermal conduit system (heat pipes) 43 thermally coupling the heat exchanger 39 with a low tank (heat storage/ heat sink) 50 of water (eutectic heat phase change liquid) and all within a Dewar flask/ thermal barrier/ (col. 5, line 47). The heat exchanger, the heat storage and the thermal conduit are located in the downhole tool.

The heat sink/ heat storage 50 absorbs heat from the overheated thermal component. When a cooling liquid in the heat storage boils, and thus, the heat storage reaches its capacity, the heat from the heat storage is removed by a compressor pumping (pump) the heat/ steam from the cooling agent in the heat storage, and condensing the steam into the cooling agent. The device, inherently, has a valve, for controlling the cooling fluid flow. It is also inherent, that, as shown above, the system is working as a closed

loop system. The thermal component is a heat-generating component that overheats during operating or, inherently, when the environment (borehole) overheats.

The method steps will be met during the normal operation of the device stated above.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Flores in view of Boesen (U.s. 4375157).

Flores discloses the device/ method as stated above.

Although Flores teaches a Dewar flask thermal insulation, Flores does not explicitly teach all the limitations of claims 13-14.

Boesen discloses a device in the field of applicant's endeavor including a vacuum insulated (evacuated) Dewar flask container.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device disclosed by Flores, so as to have a vacuum insulated/ evacuated thermally insulated container, as taught by Boesen, so as to better control the temperature of the cooling fluid, and thus, to achieve sufficient thermal component cooling.

5. Claims 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Flores.

Flores discloses the device/ method as stated above.

Flores does not explicitly teach a plurality of heat exchangers and the particular sized pump.

With respect to claim 17: having a plurality of heat exchangers, absent any criticality, is only considered to be an obvious modification of the system disclosed by Flores. While the addition of multiple heat exchangers to the concept of Flores undoubtedly makes the invention more useful with a plurality of heat exchangers, it is not the type of innovation for which a patent monopoly is to be granted. See In re St. Regis Paper Co. v. Bemis Co., Inc., 193 USPQ 8, 11 (7th Cir. 1977).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system disclosed by Flores, so as to have a plurality of heat exchangers, so as to provide the operator with fast and efficient cooling system.

6. Claims 17-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Flores in view of Drube et al. (U.S. 6799429) [hereinafter Drube].

Flores discloses the device/ method as stated above.

Flores does not explicitly teach a plurality of heat exchangers parallel or in series, as stated in claims 17-24.

Drube discloses a cooling device comprising a section of parallel-connected heat exchangers and a section of serially connected heat exchangers that provide a maximum fluid flow capability.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system disclosed by Flores, so as to have a plurality of parallel and serially connected heat exchangers, as taught by Drube, so as to provide a maximum fluid flow capability, as already suggested by Drube.

Allowable Subject Matter

7. Claims 2, 73, 81 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. Claims 45-48, 50-65, 67-68 are allowed.

Response to Arguments

9. Applicant's arguments filed on July 12, 2005 have been fully considered but they are not persuasive.

With respect to Flores: Applicant states that Flores does not teach a heat storage unit. This argument is not persuasive because Flores teaches a heat sink/ heat storage 50, which performs the same function as the heat storage of the applicant by absorbing heat from the thermal component.
Applicant states that the heat from the heat storage 50 of Flores is transformed to another location. This argument is not persuasive because the applicant does not claim otherwise. It is the claims that define the claimed invention, and it is claims, not specification that are anticipated or unpatentable. Constant v. Advanced Micro-Devices, Inc., 7 USPQ2d 1064.

Applicant states that the Examiner does not have a motivation to combine references. In response to applicant's argument, the examiner recognizes that there should be some reason why one skilled in the art would be motivated to make the proposed combination of primary and secondary references. In re Nomiya, 184 USPQ 607 (CCPA 1975). However, there is no requirement that a motivation to make the modification be expressly articuated. the test for combining references is what the combination of disclosures taken as a whole would suggest to one od ordinary skill in the art. In re McLaughlin, 170 USPQ 209 (CCPA 1971. The references are evaluated by what they suggest to one versed in the art, rather than by their specific disclosures. In re Bozek, 163 USPQ 545 (CCPA) 1969.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior art cited in the PTO-892 and not mentioned above disclose related devices and methods.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gail Verbitsky whose telephone number is 571/ 272-2253. The examiner can normally be reached on 7:30 to 4:00 ET.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diego Gutierrez can be reached on 571/ 272-2245. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

GKV *Gail Verbitsky*

Primary Patent Examiner, TC 2800

September 16, 2005